Municipal and School

PROUD TO SERVE

Transportation Assistance

Who is MSTA?

Municipal & School Transportation Assistance (MSTA) provides traffic engineering assistance through the performance of comprehensive transportation studies to North Carolina schools, state agencies, and municipalities under 50,000 in population that do not have a traffic engineering staff.

Municipal and School

Transportation Assistance

Steve Epley

MSTA School Traffic Calculator

and

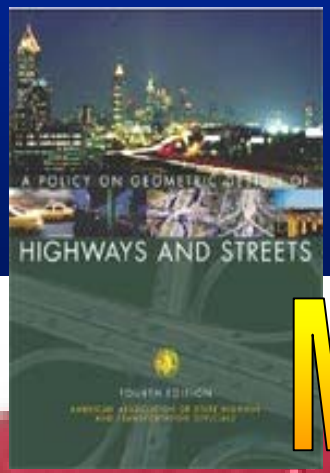
MUTCD, Part 7

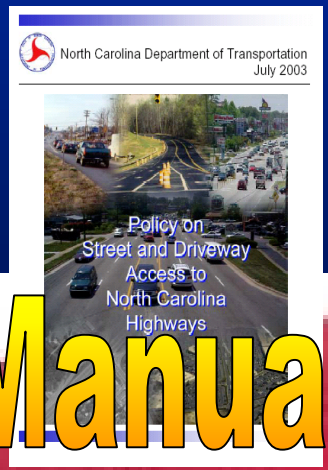
Traffic Controls for School Areas

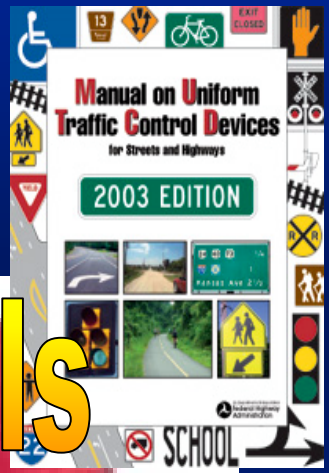
An insight to School Facilities,
Guidelines to provide better traffic operations

Do Schools have Traffic Concerns?

What is available to help with School Traffic?

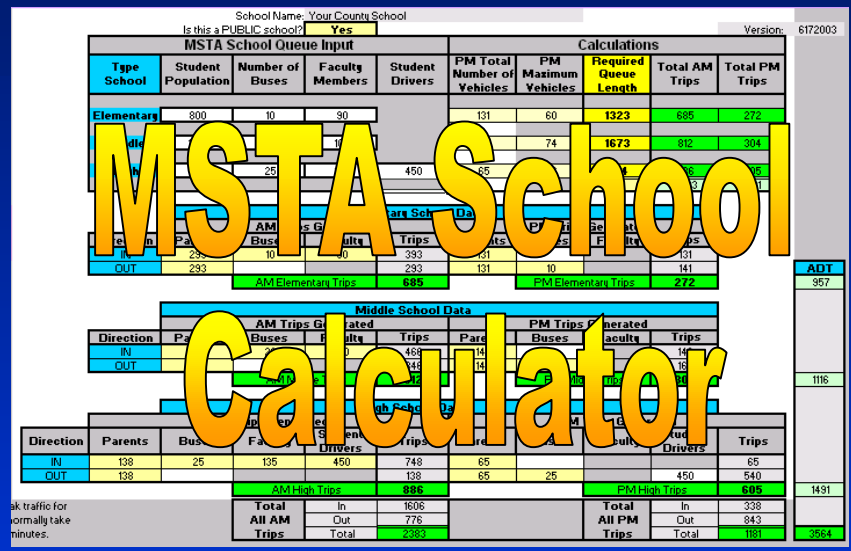






Manuals

MSTA Staff



MSTA School Calculator

School Transportation Issues

School Name: Your County School

Is this a PUBLIC school? Yes

Version: 6172003

MSTA School Queue Input

Type School	Student Population	Number of Buses	Faculty Members	Student Drivers
Elementary	800	10	90	
Middle	1000	20	100	
High	1500	25	135	450

Calculations

Type School	PM Total Number of Vehicles	PM Maximum Vehicles	Required Queue Length	Total AM Trips	Total PM Trips
Elementary	131	60	1323	685	272
Middle	142	74	1673	812	304
High	65	36	884	886	605
				2383	1181

Elementary School Data

Direction	AM Trips Generated: Parents	Buses	Faculty	Trips	PM Trips Generated: Parents	Buses	Faculty	Trips
IN	293	10	90	393	131			131
OUT	293			293	131	10		141
		AM Elementary Trips		685		PM Elementary Trips		272

ADT: 957

Middle School Data

Direction	AM Trips Generated: Parents	Buses	Faculty	Trips	PM Trips Generated: Parents	Buses	Faculty	Trips
IN	346	20	100	466	142			142
OUT	346			346	142	20		162
		AM Middle Trips		812		PM Middle Trips		304

1116

High School Data

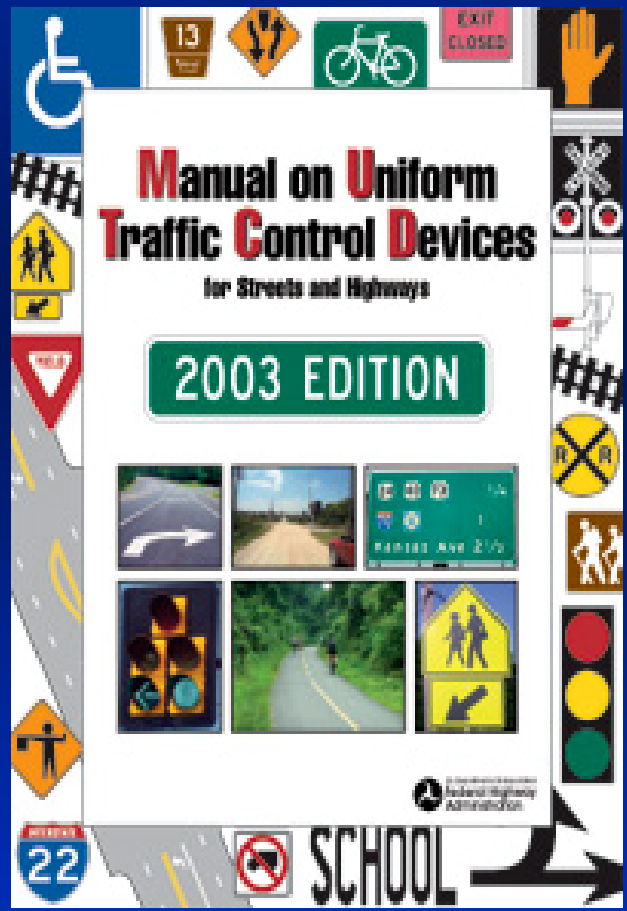
Direction	AM Trips Generated: Parents	Buses	Faculty	Student Drivers	Trips	PM Trips Generated: Parents	Buses	Faculty	Student Drivers	Trips
IN	138	25	135	450	748	65				65
OUT	138				138	65	25		450	540
			AM High Trips		886			PM High Trips		605

1491

Total All AM Trips	In	1606	
	Out	776	
	Total	2383	
Total All PM Trips	In	338	
	Out	843	
	Total	1181	

3564

ak traffic for
ormally take
minutes.



The Most Accurate School Traffic Calculator In The World!

Provided by MSTA
as a engineering tool
to help reduce school related
traffic congestion

Municipal and School

Transportation Assistance

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			ADT
Total All AM Trips	In	1606	957
	Out	776	
	Total	2383	1116
Total All PM Trips	In	338	
	Out	843	
	Total	1181	1491
			3564

ak traffic for
normally take
minutes.

Where is this information?

Municipal and School

Transportation Assistance

www.ncdot.org/~msta

ITRE

www.itre.ncsu.edu/stg

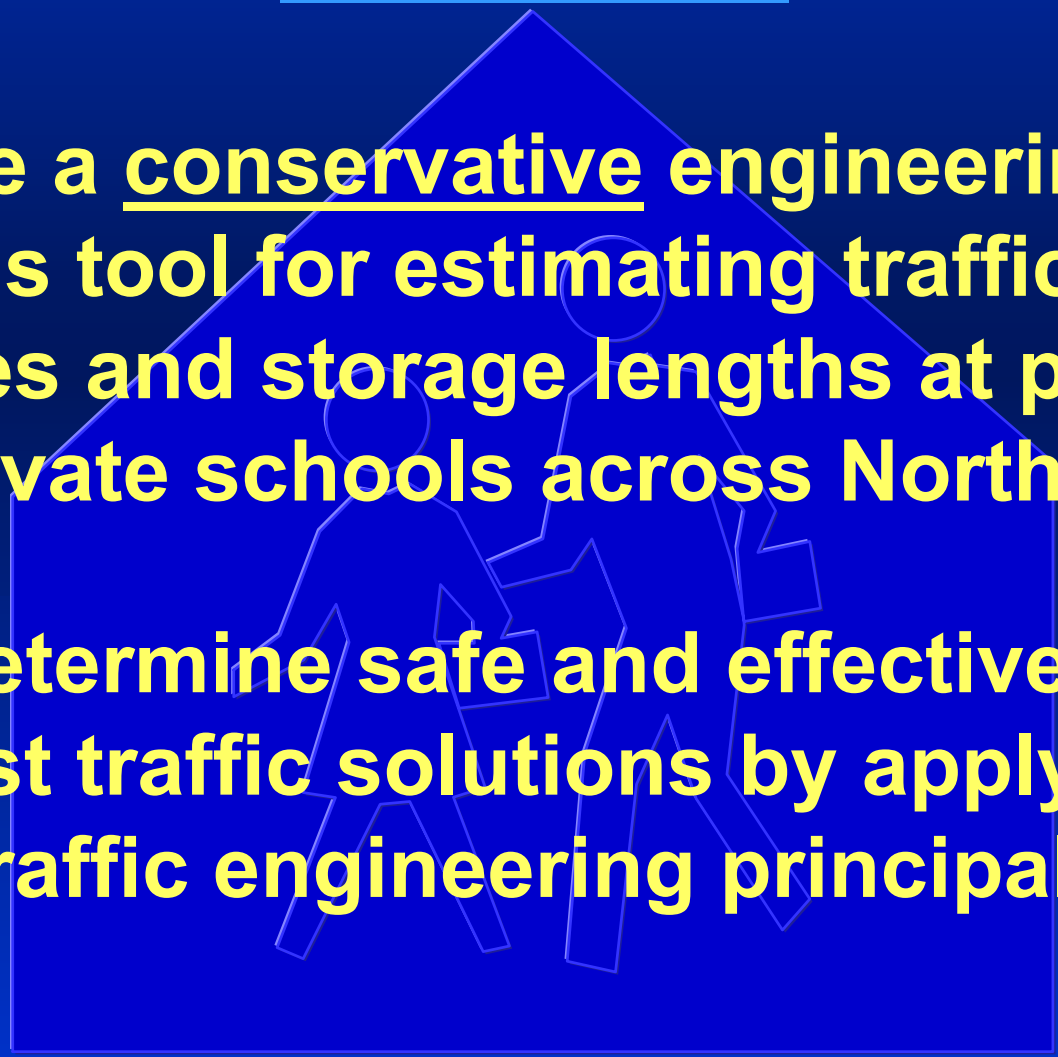
(School Transportation Group)

Institute for Transportation Research and Education

at North Carolina State University

MSTA School Traffic Calculator

Purpose



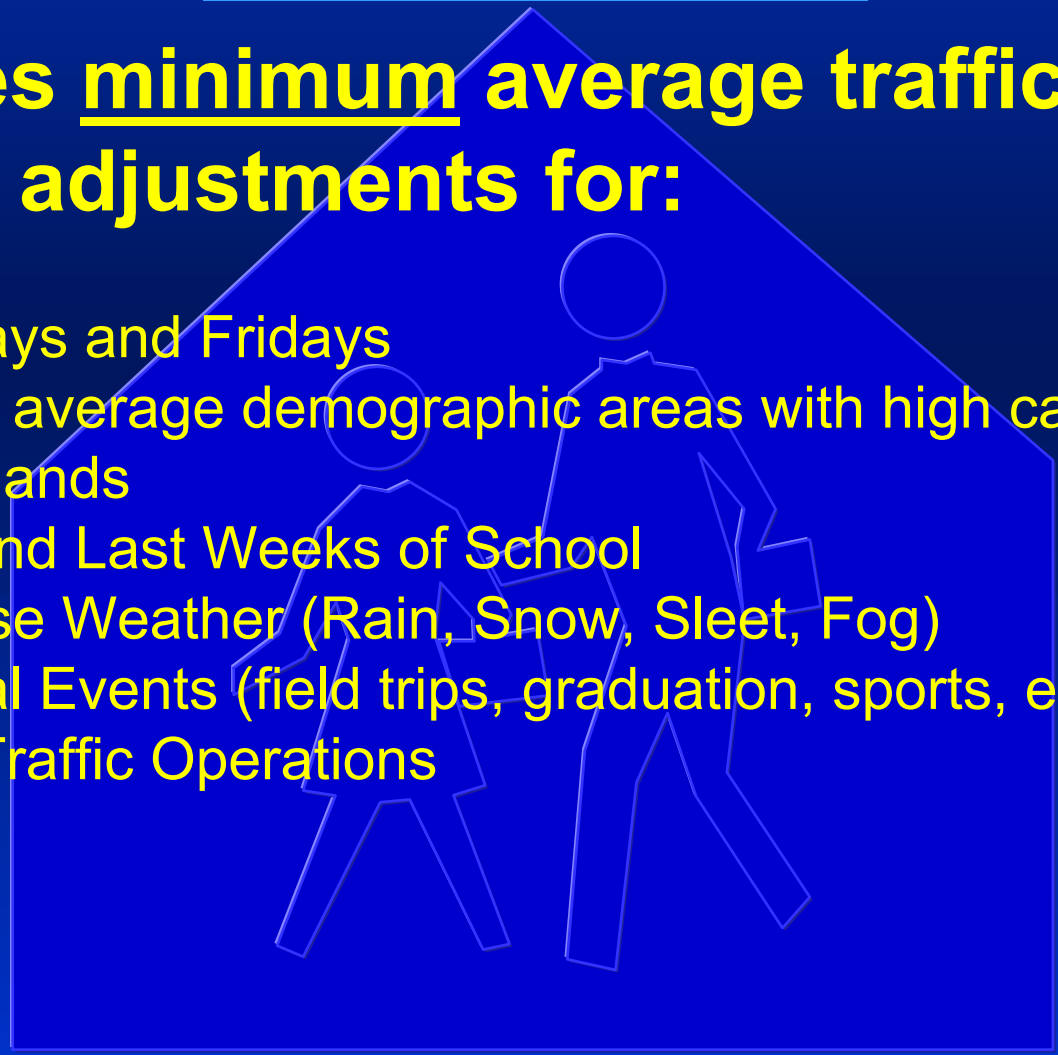
- Provide a conservative engineering analysis tool for estimating traffic volumes and storage lengths at public and private schools across North Carolina.
- Help determine safe and effective low cost traffic solutions by applying basic traffic engineering principals.

MSTA School Traffic Calculator

Limitations

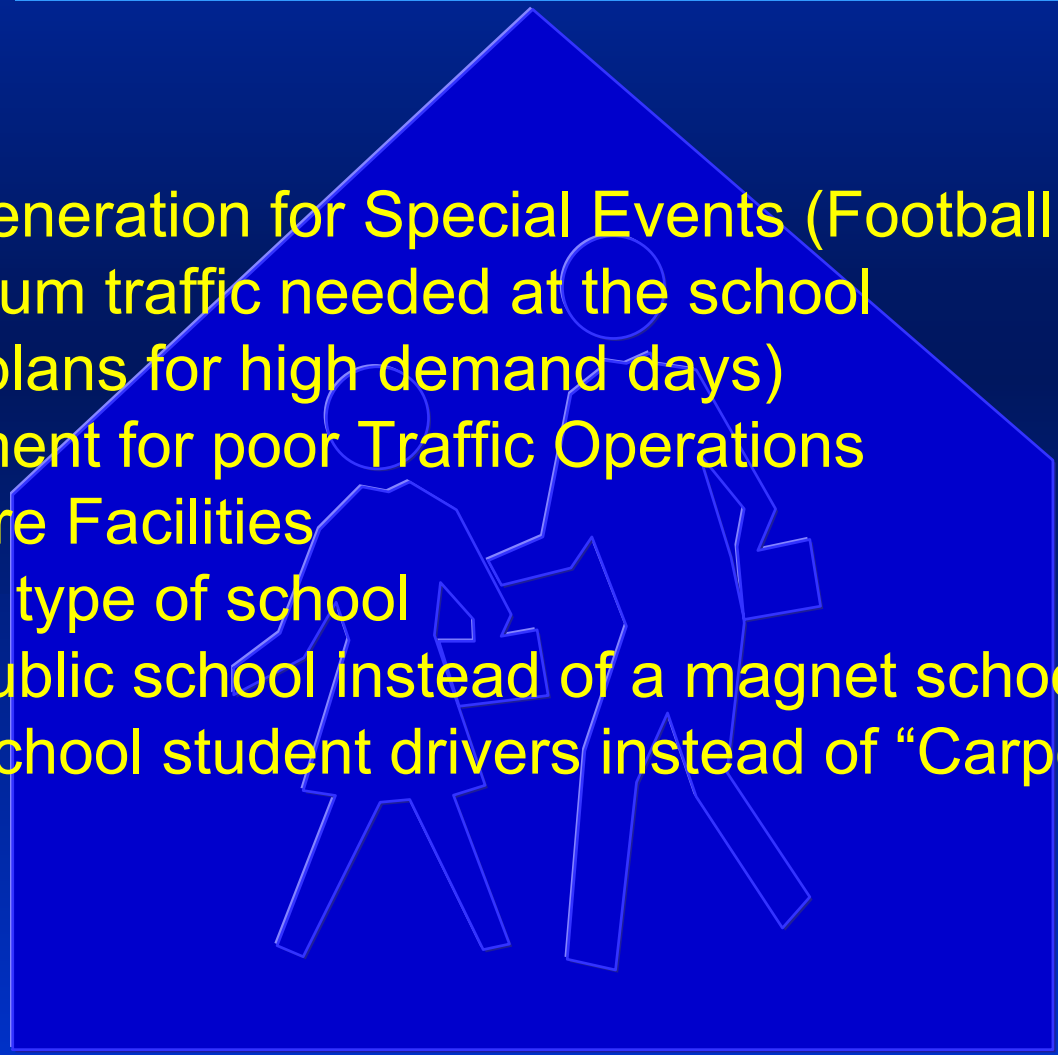
Provides minimum average traffic counts with no adjustments for:

- Mondays and Fridays
- Above average demographic areas with high carpool demands
- First and Last Weeks of School
- Adverse Weather (Rain, Snow, Sleet, Fog)
- Special Events (field trips, graduation, sports, etc...)
- Poor Traffic Operations



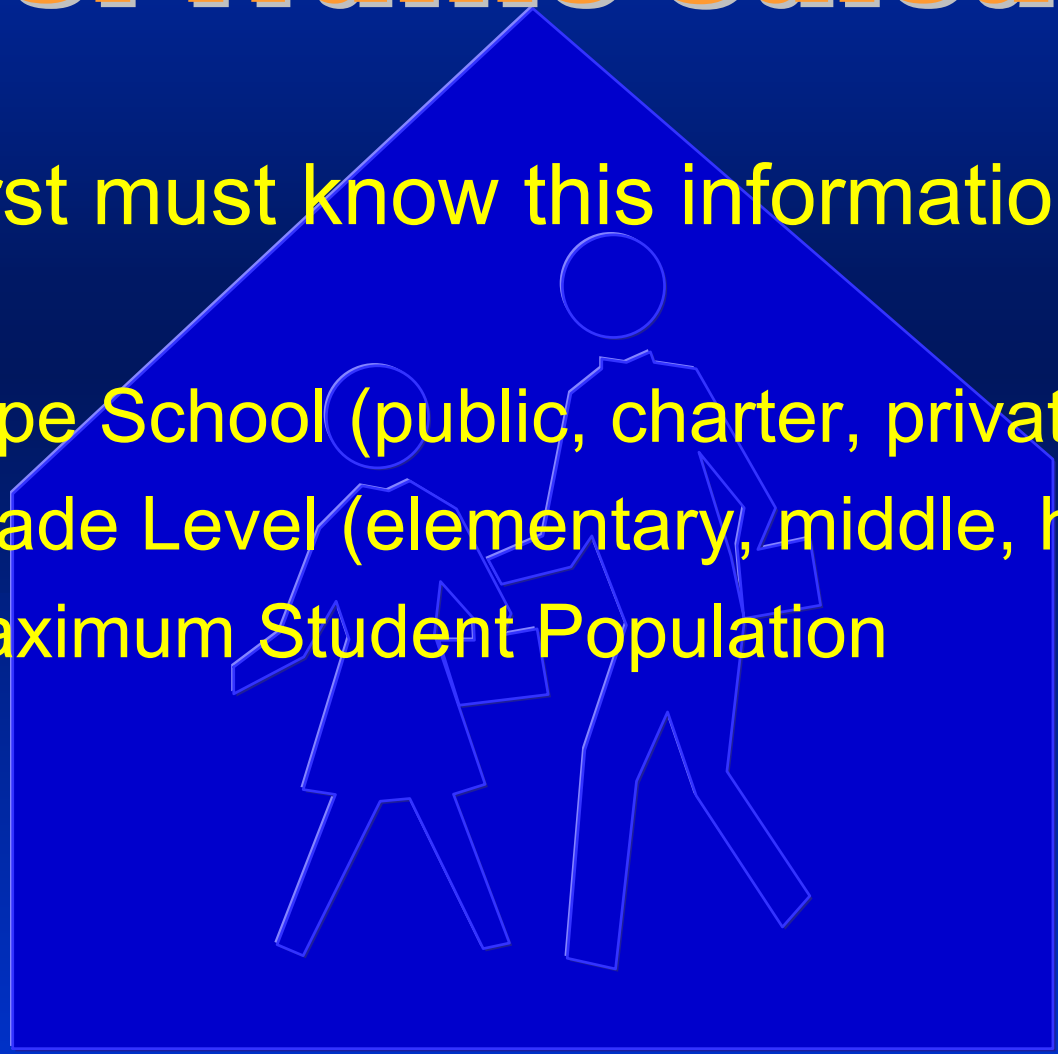
MSTA School Traffic Calculator

Common Misuses



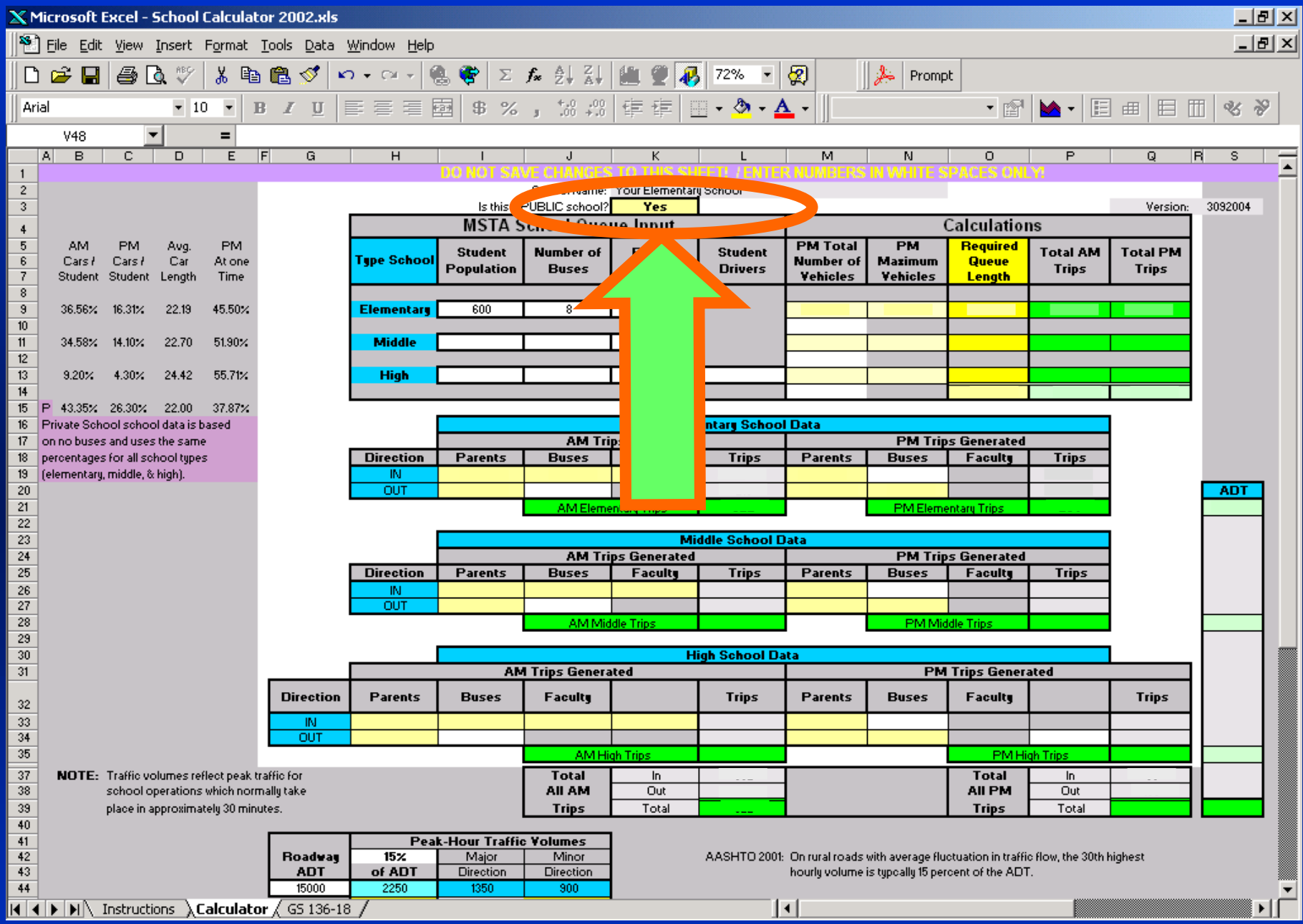
- Trip Generation for Special Events (Football Games)
- Maximum traffic needed at the school
  (no plans for high demand days)
- Treatment for poor Traffic Operations
- Daycare Facilities
- Wrong type of school
  (A public school instead of a magnet school)
- High school student drivers instead of “Carpool” storage

How do I use the School Traffic Calculator?

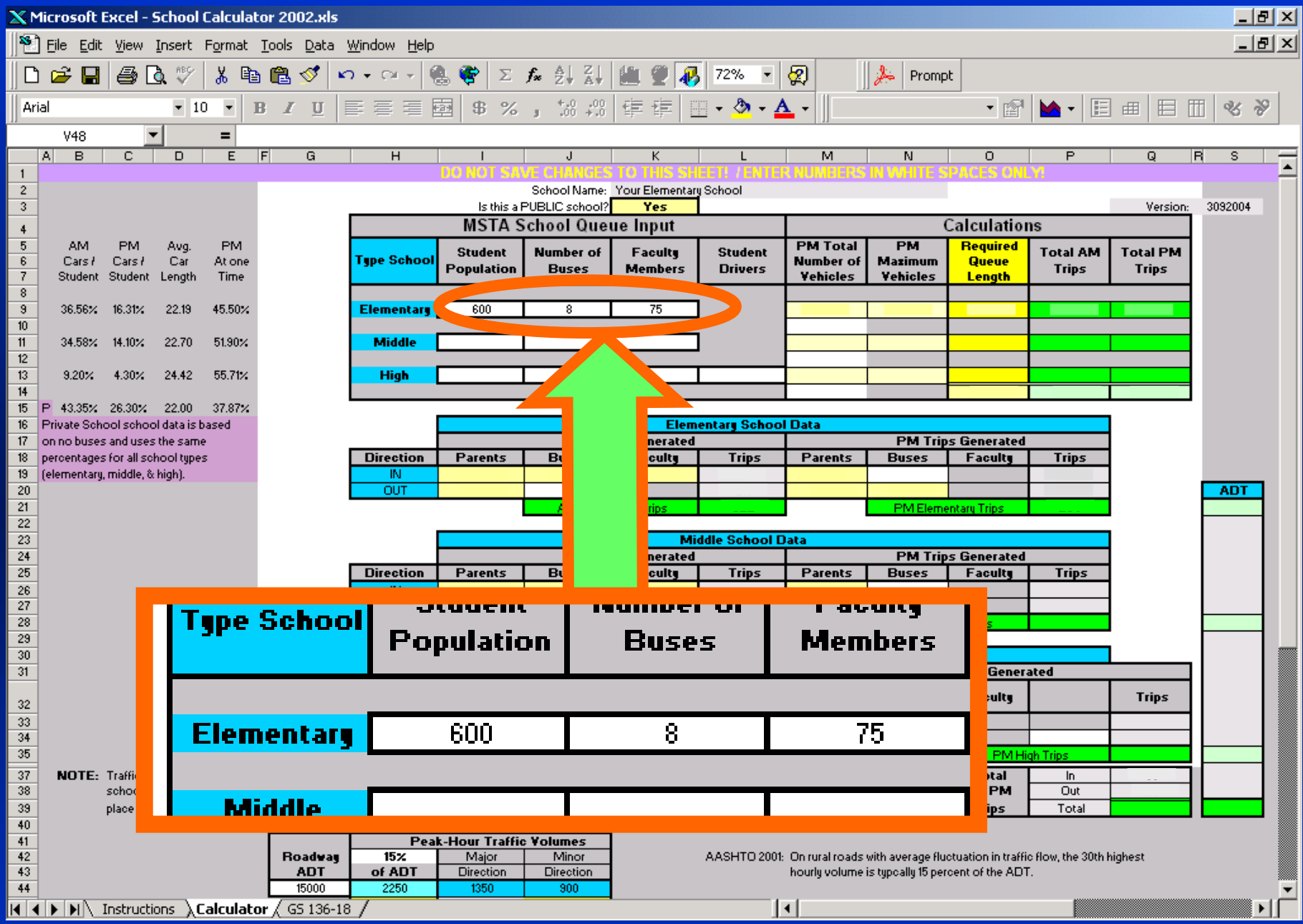


You first must know this information.

- Type School (public, charter, private)
- Grade Level (elementary, middle, high)
- Maximum Student Population



Public School, Elementary, 600 Students, 8 buses, 75 faculty



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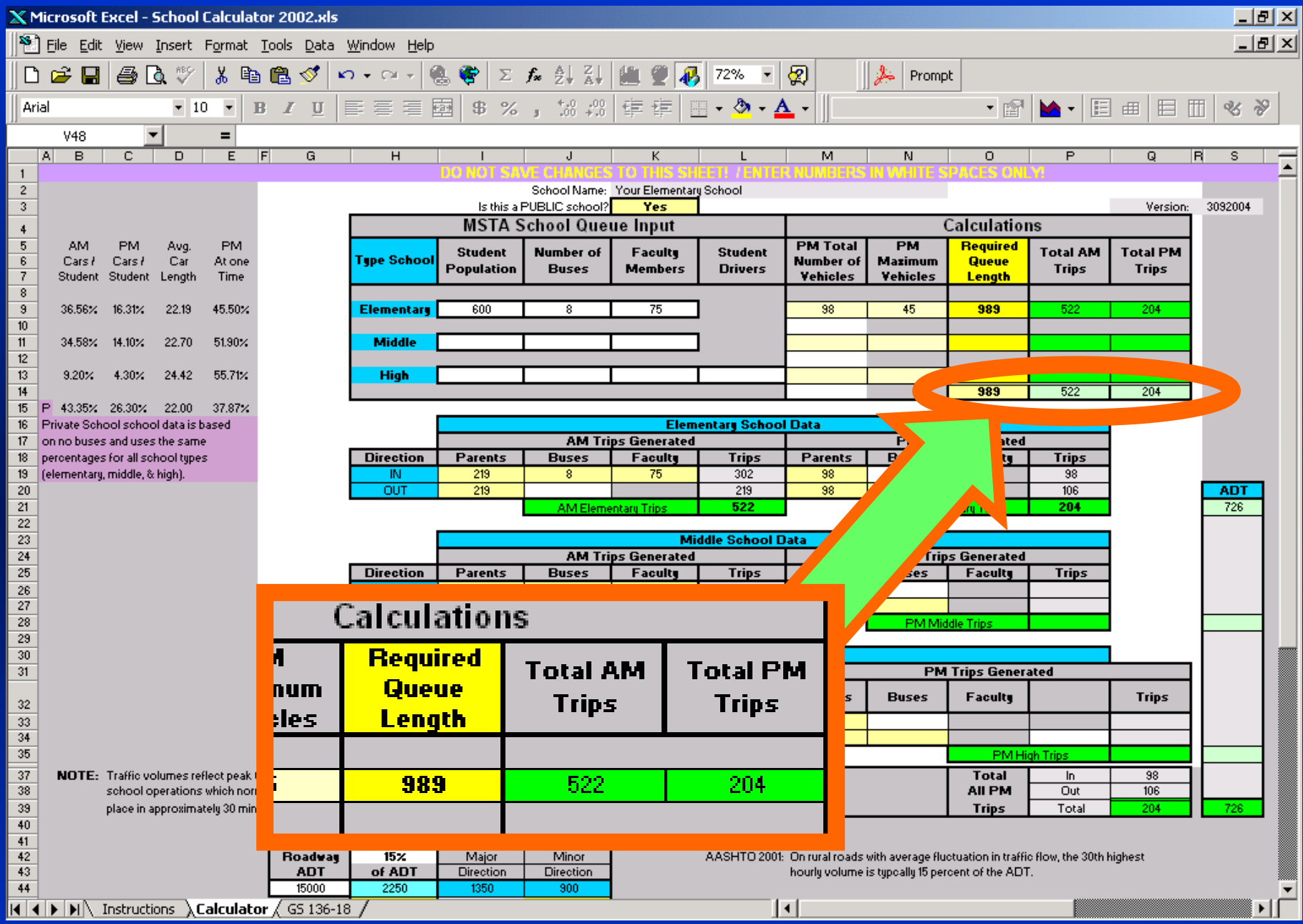
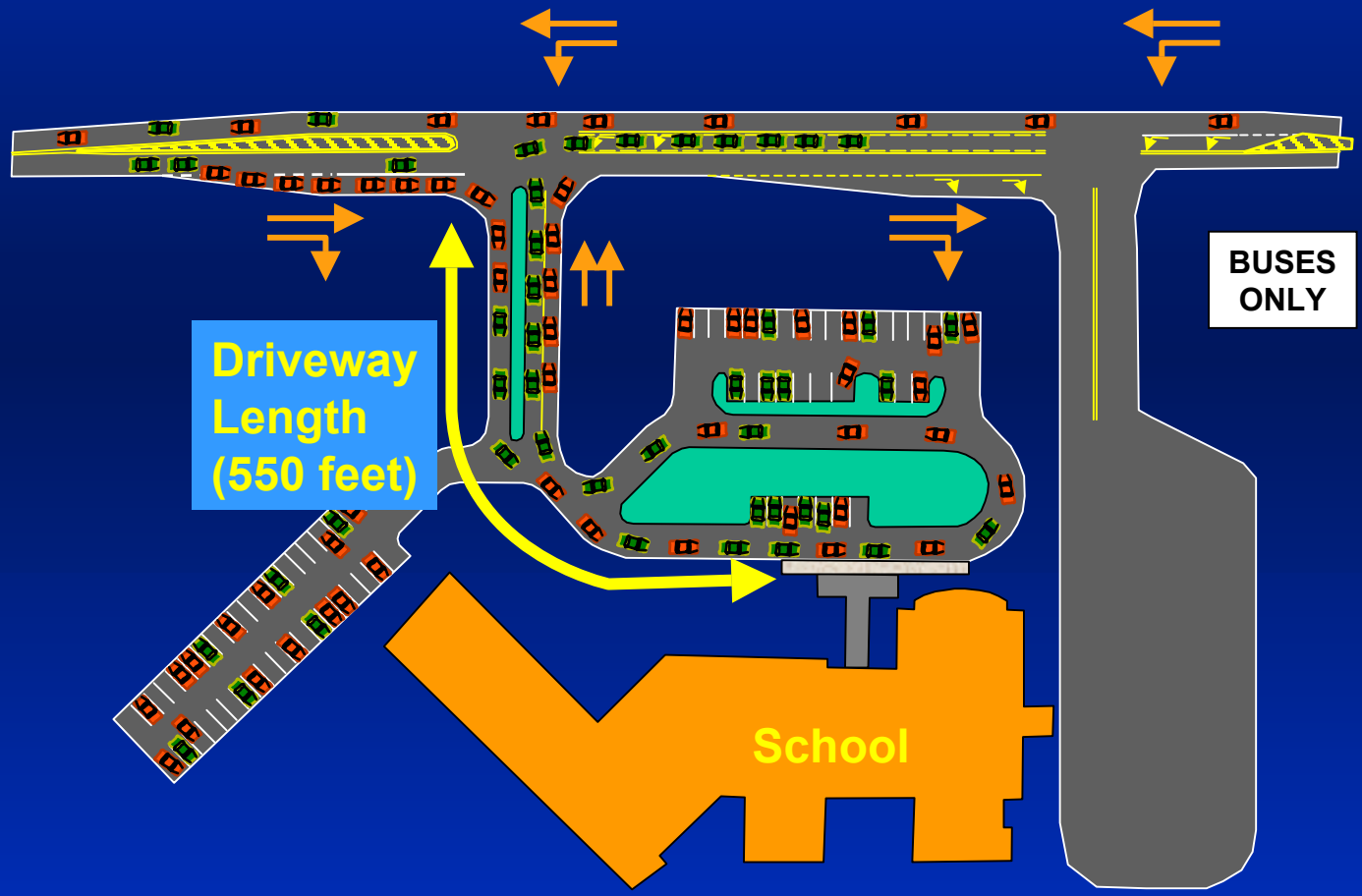


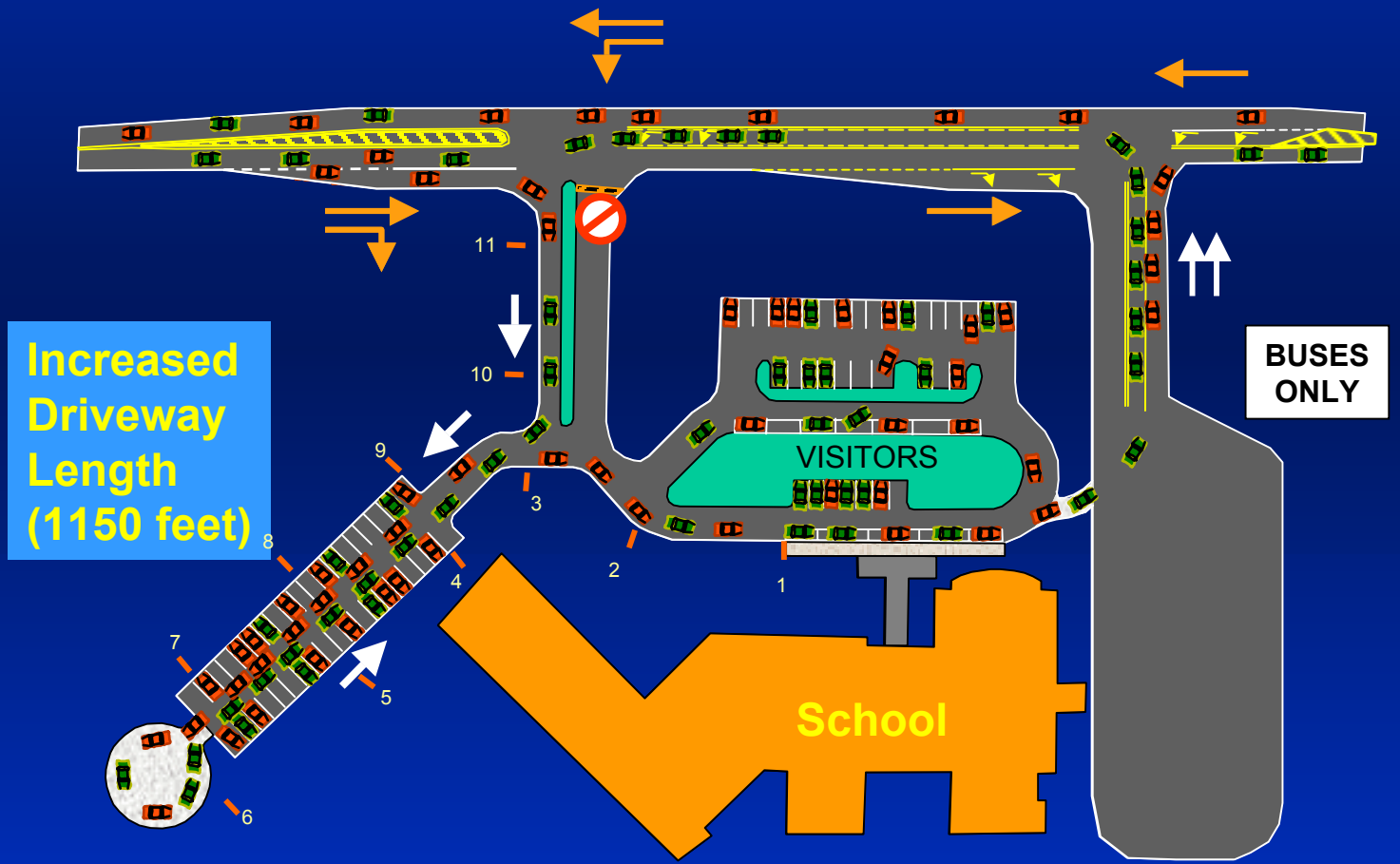
Required Queue Length of 989 feet (Trips: 522 AM, 204 PM)

EXAMPLE



Required Queue Length of 1000 feet (Trips: 522 am, 204 pm)

EXAMPLE



Required Queue Length of 1000 feet (Trips: 522 am, 204 pm)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Transportation Assistance
and You
Working Together
To Provide
Safe Roads to Schools